

TFM-6100L

AEP Model
UK Model
E Model



FM-AM POCKETABLE RADIO

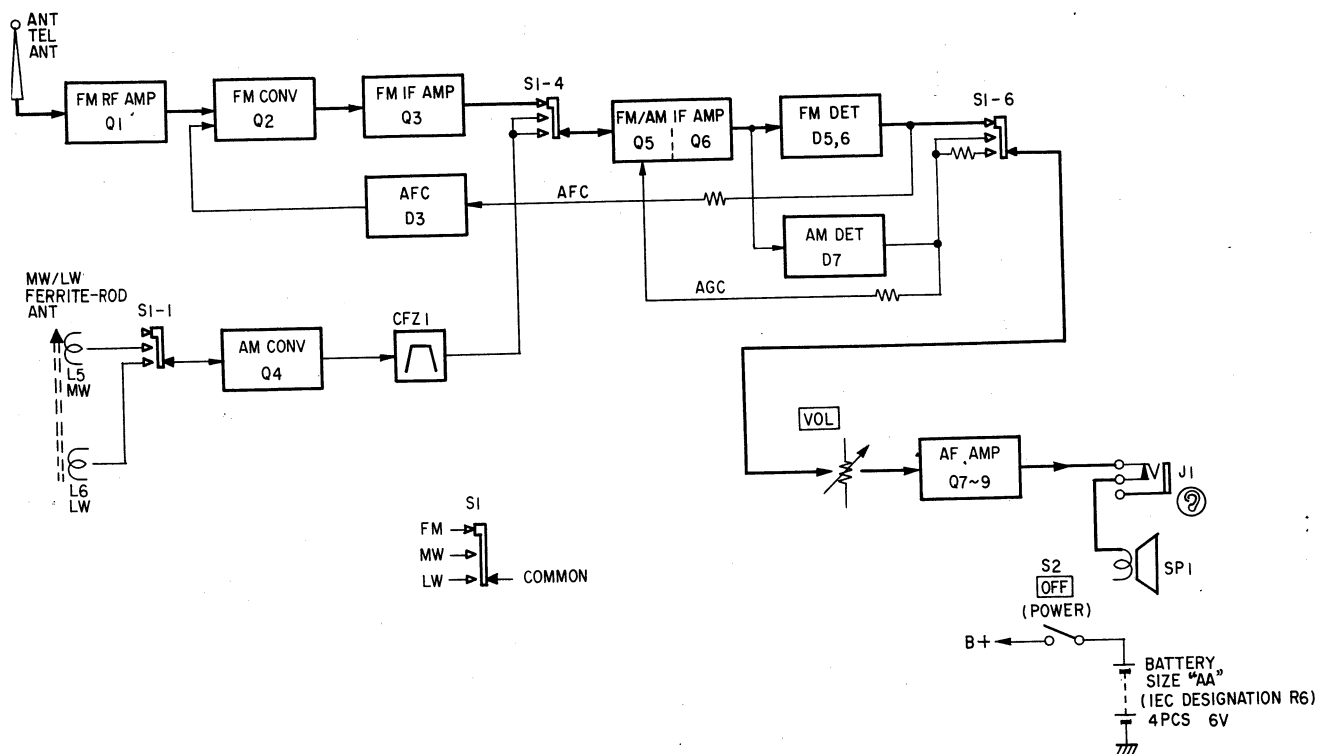
SPECIFICATIONS

Frequency Range:	FM: 87.5 – 108 MHz
	MW: 530 – 1,605 kHz
	LW: 150 – 285 kHz
Antennas:	FM: telescopic MW/LW: built-in ferrite-rod antenna
Power Output:	200 mW (with 10 % harmonic distortion)
Speaker:	6.6 cm (2½") dia
Power Requirements:	6 V dc, battery size "AA" 4 pcs (IEC designation R6)
Dimensions:	158 (w) x 96 (h) x 43 (d) mm
	6¼ (w) x 3¾ (h) x 1¾ (d) inches
Weight:	470 g, 1 lb 1 oz, with batteries

SONY
SERVICE MANUAL

SECTION 1

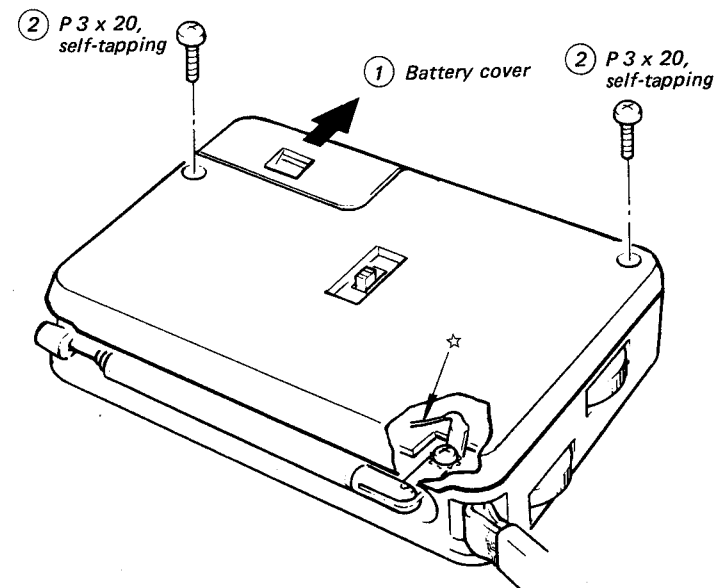
BLOCK DIAGRAM



SECTION 2 DISASSEMBLY

2-1. REMOVAL

— rear cover —

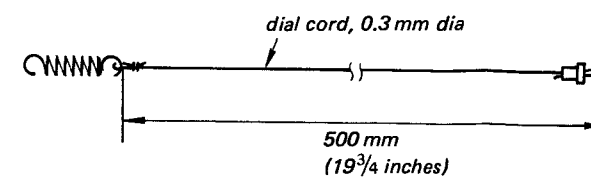


— printed circuit board —

Remove a white lead of the telescopic antenna, ("☆" mark in above), then remove the printed circuit board.

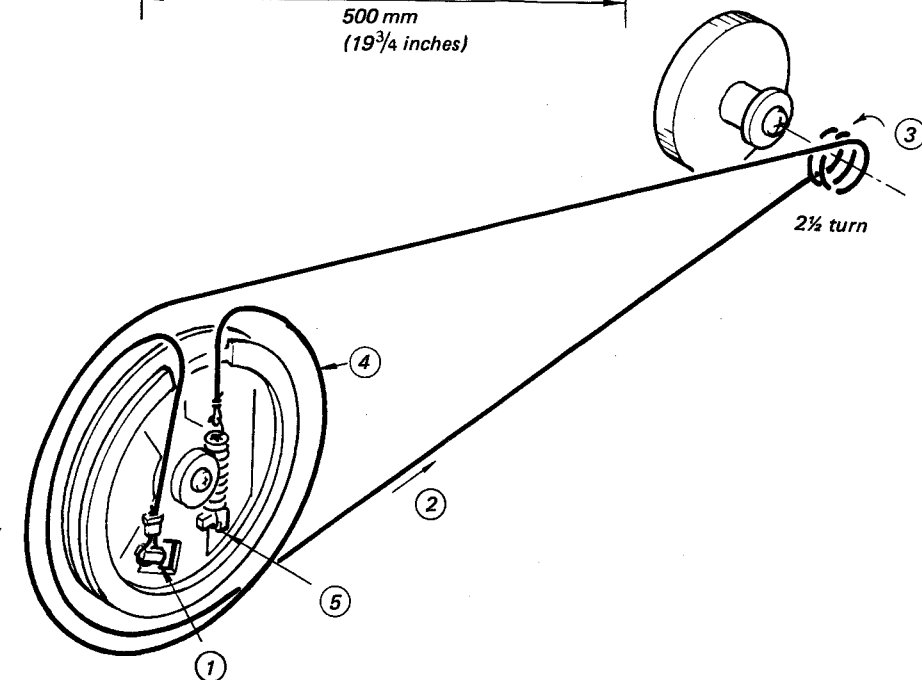
2-2. DIAL CORD STRINGING

1. Preparation



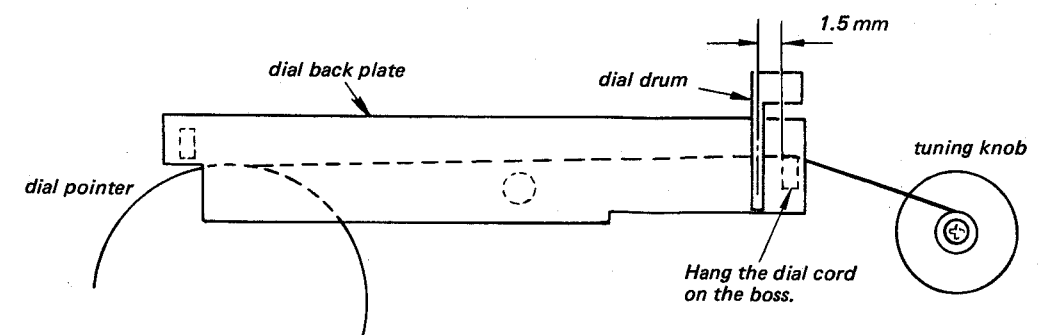
2. Dial cord stringing

Turn the dial drum fully counterclockwise.



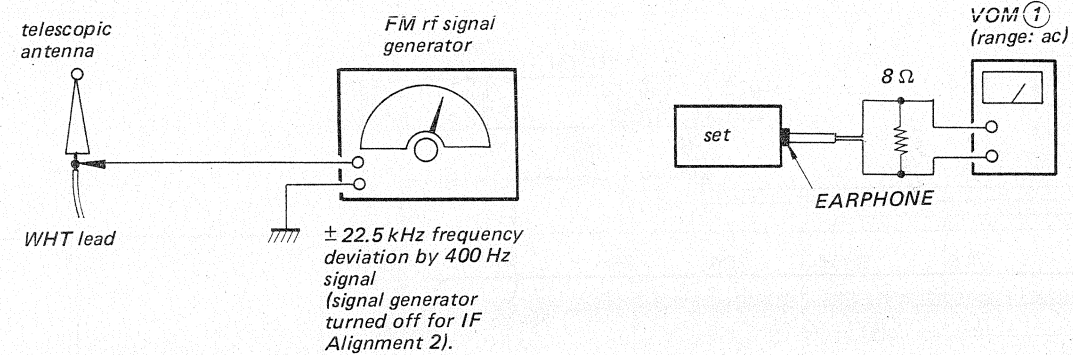
3. Dial pointer calibration

Turn the tuning knob fully clockwise.
Place the dial pointer as shown below.



SECTION 3 ADJUSTMENTS

FM



FM Frequency Coverage Adjustment	
87.1 MHz (87.5 MHz)	L4
108.5 MHz (108 MHz)	CT2
Adjust for maximum reading on VOM (1).	

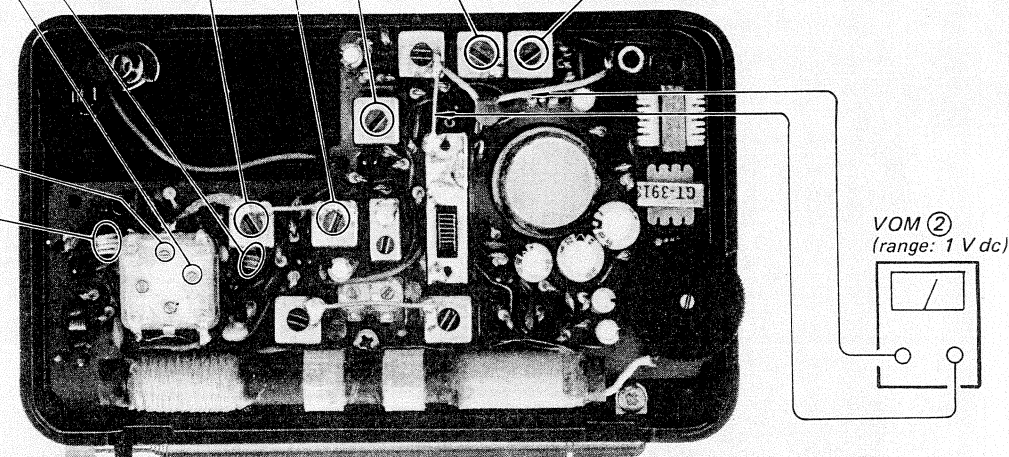
() : in West Germany

FM Tracking Adjustment	
108.5 MHz (108 MHz)	CT1
87.1 MHz (87.5 MHz)	L2
Adjust for maximum reading on VOM (1).	

() : in West Germany

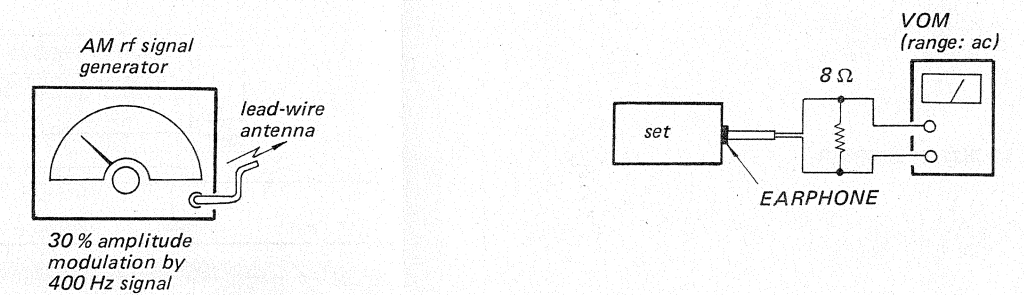
FM IF Alignment 1 (10.7 MHz)	
Adjust for maximum reading on VOM (1) with modulation.	
IFT-F1	-F2
-F3	-F4

FM IF Alignment 2	
Adjust for 0 V dc reading on VOM (2) without signal.	
IFT F5	



AM IF and MW/LW

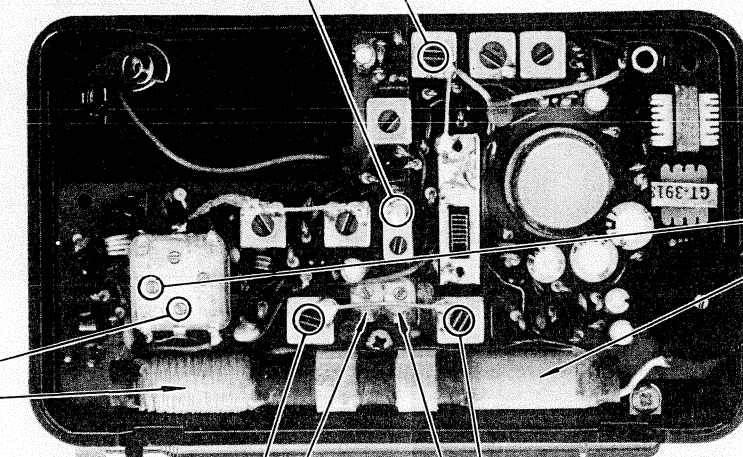
Adjust for maximum reading on VOM.



AM IF Alignment		
468 kHz	CFZ	IFT A1

LW Tracking Adjustment	
CT4	260 kHz
L6	185 kHz

LW Frequency Coverage Adjustment	
145 kHz	L8
300 kHz	CT5



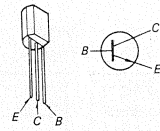
MW Tracking Adjustment	
CT3	1400 kHz
L5	620 kHz

Note:
After this adjustment, perform LW Frequency Coverage and Tracking Adjustment.

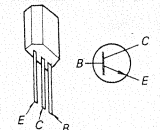
MW Frequency Coverage Adjustment	
520 kHz	L7
1680 kHz	CT6

SECTION 4
DIAGRAMS4-1. MOUNTING DIAGRAM
— Conductor Side —

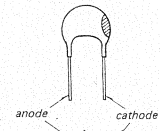
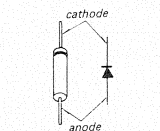
Q1-6, D3: 2SC710



Q7-9: 2SC633A

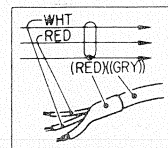


D8: VD1120

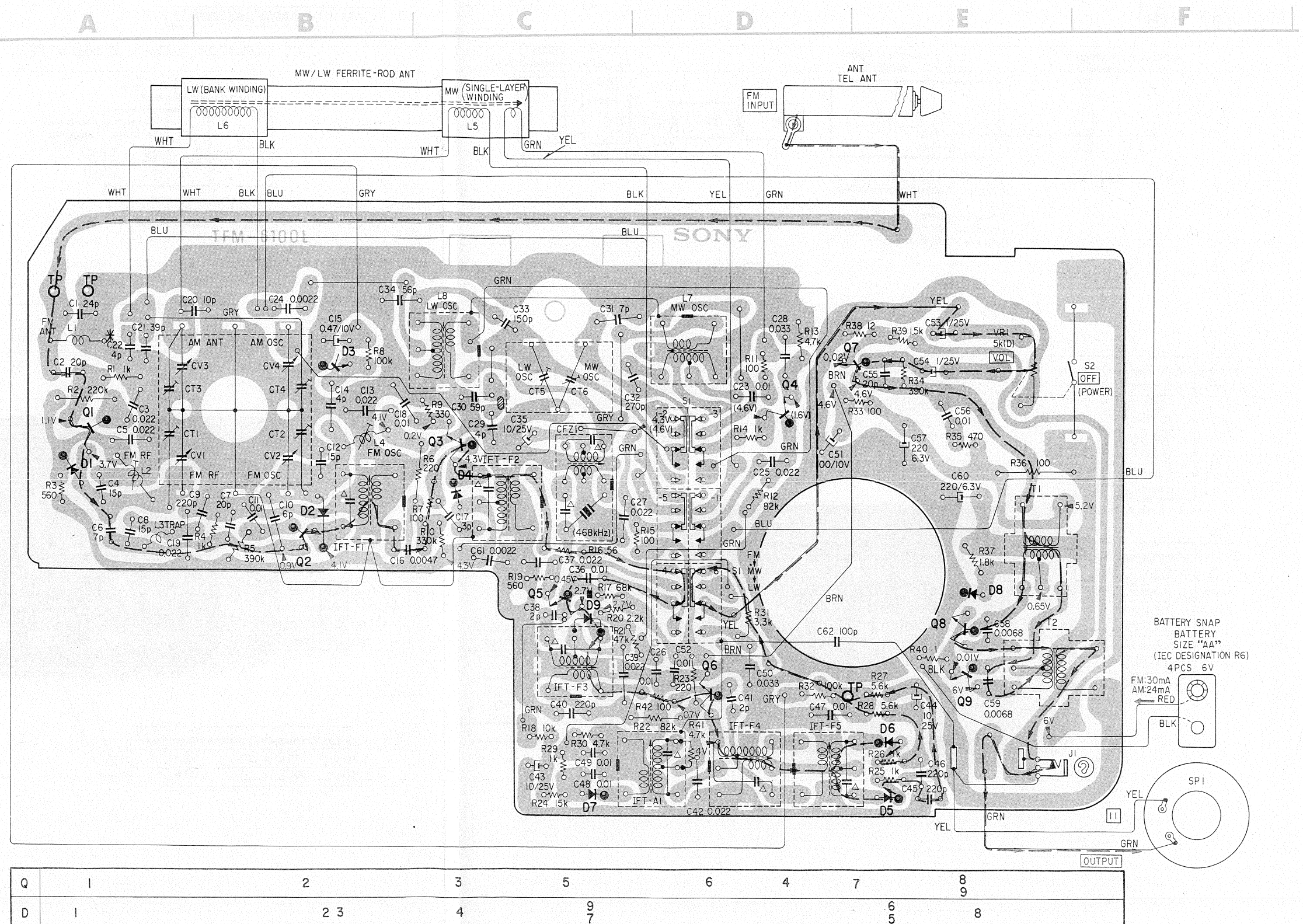
D1, 4 : 1S1555
D2, 5, 6, 9: 1T261
D7 : 1T22A

Note:

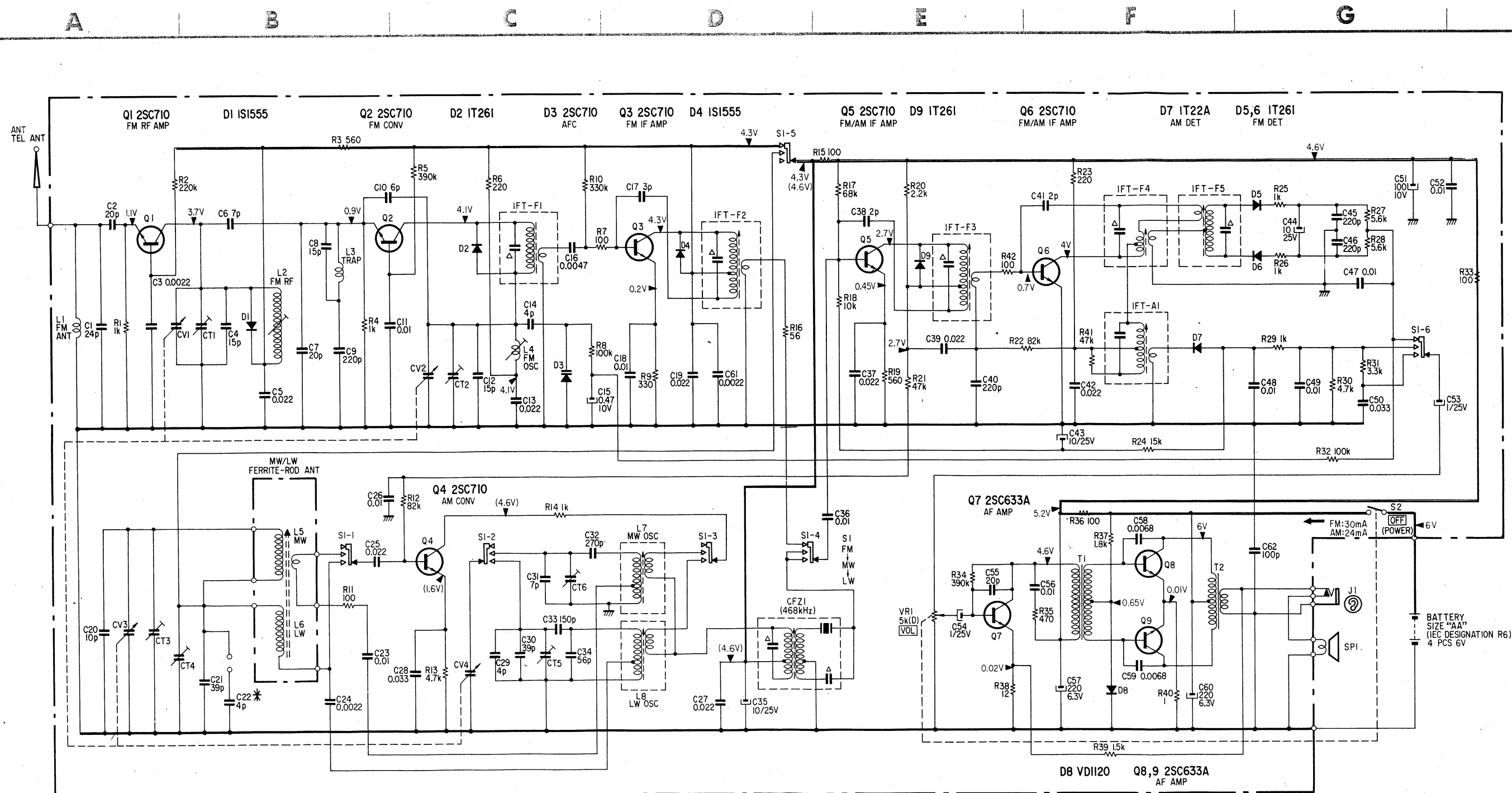
- Color code of sleeving over the end of the jacket.



- part mounted on the conductor side.
- indicates side identified with part number.
- B+ pattern
- signal path
- * : for adjustment.



4-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\mu\text{F}$. 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms. $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.

- \triangle : internal component.
- \square : panel designation.
- Readings are taken under detuned conditions with a VOM (20 $\text{k}\Omega/\text{V}$).
- () : AM no mark: FM
- Transistor is used for D3.
- * : for adjustment.

- — : B+ bus.
- Switch

Ref. No.	Switch	Position
S1	BAND	FM
S2	POWER	OFF

EXPLODED VIEWS



- 11 -

3

ELECTRICAL PARTS LIST

Note: Circled letters (A to Z) are applicable to European models only.

SEMICONDUCTORS

Transistors

SEMICONDUCTORS

Transistors

Q1-6 (B) 2SC710
Q7-9 (B) 2SC633A

Diodes

D1	(B) 1S1555
D2	(B) 1T261
D3	(B) 2SC710
D4	(B) 1S1555
D5, 6	(B) 1T261

Coils

L5, 6	1-401-699-00	(D)	Ferrite-rod Antenna, MW/LW
L7	1-405-761-00	(B)	MW Osc
L8	1-405-762-00	(J)	LW Osc

Transformers

T1	1-423-066-XX	(B) Input
T2	1-427-429-00	(B) Output
IFT, A-1	1-403-813-00	(B) AM IFT
IFT, F-1	1-403-899-00	(B) FM IFT
IFT, F-2, 3	1-403-284-00	(B) FM IFT
IFT, F-4	1-403-903-00	(B) FM IFT, Discriminator
IFT, F-5	1-403-902-00	(B) FM IFT, Discriminator

CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted.
50WV or less are not indicated except for electrolytics.
 $\text{pF} = \mu\mu\text{F}$, elect = electrolytic

C1	1-102-960-11	(A) 24 p
C2	1-102-958-11	(A) 20 p
C3	1-101-919-11	(A) 0.0022
C4	1-102-951-11	(A) 15 p
C5	1-101-924-11	(A) 0.022

C6	1-102-944-11	(A) 7 p
C7	1-102-958-11	(A) 20 p
C8	1-102-951-11	(A) 15 p
C9	1-102-978-11	(A) 220 p
C10	1-102-943-11	(A) 6 p

C11	1-101-923-11	(A) 0.01		
C12	1-102-670-11	(A) 18 p		
C13	1-101-924-11	(A) 0.022		
C14	1-102-937-11	(A) 4 p		
C15	1-127-022-11	(A) 0.47	10 V	solid aluminum

C16	1-101-922-11	(A) 0.0047
C17	1-102-936-11	(A) 3 p
C18	1-101-923-11	(A) 0.01
C19	1-101-924-11	(A) 0.022
C20	1-102-947-11	(A) 10 p

C21	1-102-965-11	(A) 39 p	
C22	1-102-937-11	(A) 4 p	
C23	1-108-239-12	(A) 0.01	mylar
C24	1-108-230-12	(A) 0.0022	mylar
C25	1-101-924-11	(A) 0.022	

C26	1-108-239-12	(A) 0.01	mylar
C27	1-108-242-12	(A) 0.022	mylar
C28	1-108-244-12	(A) 0.033	mylar
C29	1-102-937-11	(A) 4 p	
C30	1-102-965-11	(A) 39 p	

C31	1-102-944-11	(A) 7 p	
C32	1-103-711-11	(A) 270 p	
C33	1-103-705-11	(A) 150 p	
C34	1-102-730-11	(A) 56 p	
C35	1-121-651-11	(A) 10	16 V elect

C36	1-101-923-11	(A) 0.01
C37	1-101-924-11	(A) 0.022
C38	1-102-935-11	(A) 2 p
C39	1-101-924-11	(A) 0.022
C40	1-102-978-11	(A) 220p

C41	1-102-935-11	(A) 2 p		
C42	1-101-924-11	(A) 0.022		
C43, 44	1-121-651-11	(A) 10	16 V	elect
C45, 46	1-102-978-11	(A) 220 p		

Note: Circled letters (A) to (Z) are applicable to European models only.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C47, 48, 49	1-108-239-12 (A) 0.01	mylar
C50	1-108-244-12 (A) 0.033	mylar
C51	1-121-414-11 (A) 100	10 V elect
C52	1-101-923-11 (A) 0.01	
C53, 54	1-121-391-11 (A) 1	50 V elect
C55	1-102-958-11 (A) 20 p	
C56	1-108-239-12 (A) 0.01	mylar
C57	1-121-420-11 (B) 220	10 V elect
C58, 59	1-108-237-12 (A) 0.0068	mylar
C60	1-121-420-11 (B) 220	10 V elect
C61	1-101-919-11 (A) 0.0022	
C62	1-101-923-11 (A) 0.01	
CFZ	1-403-823-00 (C) CFZ	
CT5, 6	1-141-146-XX (B) Trimmer	
CV1-4	1-151-323-00 (H) Tuning	

MISCELLANEOUS

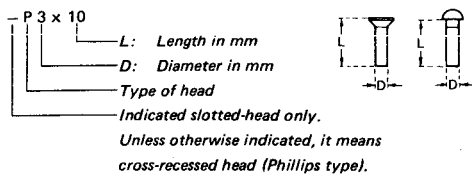
ANT	1-501-160-00 (E) Telescopic Antenna
J1	1-507-450-00 (B) Jack, earphone
S1	1-552-186-00 (C) Switch, slide; FM/MW/LW
S2	1-224-077-21 (B) Switch; POWER included in VR1
SP	1-502-265-XX (E) Speaker
VR1	1-224-077-21 (B) Resistor, 5 k Ω ; variable; VOLUME
	1-535-502-00 (B) Snap, battery

ACCESSORIES

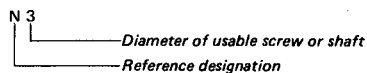
<u>Part No.</u>	<u>Description</u>
X-3982-533-0	(E) Carton Ass'y
1-504-055-12	(B) Earphone (ME-20H)
3-846-826-01	(A) Sheet, protection
3-982-427-00	(A) Sheet
3-982-436-11	(A) Manual, instruction (AEP, E model)
3-982-436-21	(A) Manual, instruction (UK model)
3-982-437-01	(A) Label, FTZ













HARDWARE NOMENCLATURE














Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

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Service Bulletin

Date	23 Aug 78	Ref. N°	TR-00578	Model	TFM-6100L
Subject	Correction of S/M Correction du M/S Berichtigung des Service-Handbuchs				

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